UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,418	07/30/2003	Mark W. Fagan	2003-0030.02	8932

21972 7590 07/12/2005

LEXMARK INTERNATIONAL, INC.
INTELLECTUAL PROPERTY LAW DEPARTMENT
740 WEST NEW CIRCLE ROAD
BLDG. 082-1
LEXINGTON, KY 40550-0999

EXAMINER	
DO, AN H	

ART UNIT	PAPER NUMBER
2853	

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/630,418	FAGAN ET AL.	
	Examiner	Art Unit	
	An H. Do	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) *21-23* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/30/03&10/27/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The Response filed on 12 May 2005 has been acknowledged.

Election/Restrictions

1. Applicant's election of Species I including claims 1-20 in the reply filed on 12 May 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Claims 21-23 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

Information Disclosure Statement

3. The information disclosure statements (IDS) submitted on 30 July 2003 and 27 October 2003 were filed and are being considered by the examiner.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakuma (US 5,663,750).

Sakuma discloses the following claimed features:

Regarding claims 1 and 3, Sakuma discloses a method of informing a user of an imaging apparatus of an event (Figure 4, S3, column 6, lines 5-7: Display Warning of little ink remaining), said imaging apparatus having a plurality of print modes (column 2, lines 44-62: normal and saving printing modes), said method comprising the steps of:

-defining a notice threshold that is associated with said event (column 2, lines 5-12: the notice threshold is a predetermined amount of ink remaining in the ink reservoir);

-determining whether said notice threshold has been reached (column 2, lines 5-12 and column 2, lines 29-33: the detected amount of ink is less than a predetermined amount of ink remaining in the ink reservoir); and

-upon reaching said notice threshold, progressively reducing an image density of an image formed by said imaging apparatus based on a print mode said imaging apparatus was operating in when said notice threshold was (column 2, lines 46-55 and column 8, lines 3-13: saving mode when little remaining ink).

Regarding claims 2, 6, 11, 15 and 20, further comprising the step of defining a respective number of print swaths for each of said plurality of print modes at which a next print density of a plurality of print densities will be selected to facilitate said progressively reducing step (column 8, lines 7-13: reducing volume to 2/3 while in normal printing mode and reducing volume to ½ while in saving mode). And also Sakuma therefore teaches an imaging apparatus in view of the fact that the method is taught.

Regarding claims 4 and 13, wherein said imaging apparatus is an ink jet printer (Figure 2), said notice threshold is one of a plurality of thresholds, each of said plurality

of thresholds having associated therewith a respective corresponding amount of ink remaining (column 2, lines 5-12: the notice threshold is a predetermined amount of ink remaining in the ink reservoir, and column 8, lines 15-25).

Regarding claims 5 and 14, further comprising the step of defining a plurality of print densities for use in progressively reducing sad image density of said image (column 8, lines 7-13: reducing volume to 2/3 while in normal printing mode and reducing volume to ½ while in saving mode). And also Sakuma therefore teaches an imaging apparatus in view of the fact that the method is taught.

Regarding claims 7 and 16, wherein said respective number of print swaths increases with an increase of printing resolution of said plurality of print modes (Figure 8 shows when a warning displays, the ink mode is activated but if a new cartridge exchanged then the normal and original print mode is activated. Therefore, the number of print swaths increases with an increase in printing resolution). And also Sakuma therefore teaches an imaging apparatus in view of the fact that the method is taught.

Regarding claims 8 and 17, wherein a number of print swaths for a first print mode (when the printing is in saving mode) having a first print resolution (column 8, lines 7-13: reducing volume to ½ while in saving mode) is less than a number of print swaths for a second printing mode (when the printing resumes in normal mode after the exchange of cartridge) having a second print resolution (original drive signal) higher than said first print resolution (Figure 8, column 7, lines 62-67). And also Sakuma therefore teaches an imaging apparatus in view of the fact that the method is taught.

Regarding claims 9 and 18, wherein said step of progressively reducing an image density is achieved relatively uniformly for each of a first print mode (normal printing mode) and a second print mode (saving mode) (column 8, lines 3-13). And also Sakuma therefore teaches an imaging apparatus in view of the fact that the method is taught.

Regarding claims 10, 12 and 19, an ink jet printer (Figures 2 and 3) having a plurality of print modes selectable by a user (column 4, lines 26-38), comprising: a carrier (9) for carrying a printhead (8), said printhead (8) being connected in fluid communication with a reservoir, said reservoir containing a supply of ink; a memory (22) that stores a notice threshold associated with a usable amount of ink in said reservoir having been depleted; and a control system (controller 20) coupled to said printhead (8) and coupled to said memory (22), said control system being configured to perform the steps of: determining whether said notice threshold has been reached (column 2, lines 5-12 and column 2, lines 29-33: the detected amount of ink is less than a predetermined amount of ink remaining in the ink reservoir); and upon reaching said notice threshold, progressively reducing an image density of an image formed by said ink jet printer based on a print mode said ink jet printer was operating in when said notice threshold was reached (column 2, lines 46-55 and column 8, lines 3-13: saving mode when little remaining ink).

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to An H. Do whose telephone number is 571-272-2143. The examiner can normally be reached on Monday-Friday (Flexible).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

An H. Do
July 8, 2005